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ME 8: Containerization and Docker

Activity 1

Pulling ubuntu images

```
Windows PowerShell
PS Y:\wsl\197\ME8_Containerization_and_Docker\1-running_containers> docker pull ubuntu:16.04
16.04: Pulling from library/ubuntu
80bce60046fa: Pull complete
55a730a15540: Pull complete
e19cf0706c62: Pull complete
de1cdd6c27d1: Pull complete
Digest: sha256:98afb2808e1ec6aa4d7c8f8b82c6347b9ae156932f7186182b997f3d5616ebe
Status: Downloaded newer image for ubuntu:16.04
docker.io/library/ubuntu:16.04
PS Y:\wsl\197\ME8_Containerization_and_Docker\1-running_containers> docker pull ubuntu:16.10
16.10: Pulling from library/ubuntu
dca7be20e546: Downloading [=====] 14.9MB/42.79MB
40bca54f5968: Download complete
61464f23390e: Download complete
d99f0bcd5dc8: Download complete
120db6f90955: Download complete
```

Running bash

```
root@759949382d99: /
PS Y:\wsl\197\ME8_Containerization_and_Docker\1-running_containers> docker run -it ubuntu:16.04 /bin/bash
root@759949382d99:/# pwd
/
root@759949382d99:/# ls
bin boot dev etc home lib lib64 media mnt opt proc root run sbin srv sys usr var
root@759949382d99:/# ls -la
total 72
drwxr-xr-x 1 root root 4096 May 25 14:49 .
drwxr-xr-x 1 root root 4096 May 25 14:49 ..
-rwxr-xr-x 1 root root 0 May 25 14:49 .dockerenv
drwxr-xr-x 2 root root 4096 Apr 29 07:08 bin
drwxr-xr-x 2 root root 4096 Apr 12 2016 boot
drwxr-xr-x 5 root root 360 May 25 14:49 dev
drwxr-xr-x 1 root root 4096 May 25 14:49 etc
drwxr-xr-x 2 root root 4096 Apr 12 2016 home
drwxr-xr-x 8 root root 4096 Sep 13 2015 lib
drwxr-xr-x 2 root root 4096 Apr 29 07:08 lib64
drwxr-xr-x 2 root root 4096 Apr 29 07:08 media
drwxr-xr-x 2 root root 4096 Apr 29 07:08 mnt
drwxr-xr-x 2 root root 4096 Apr 29 07:08 opt
dr-xr-xr-x 191 root root 0 May 25 14:49 proc
drwx----- 2 root root 4096 Apr 29 07:08 root
drwxr-xr-x 1 root root 4096 Apr 29 07:08 run
drwxr-xr-x 1 root root 4096 May 19 19:45 sbin
drwxr-xr-x 2 root root 4096 Apr 29 07:08 srv
dr-xr-xr-x 11 root root 0 May 25 14:49 sys
drwxrwxrwt 2 root root 4096 Apr 29 07:08 tmp
drwxr-xr-x 1 root root 4096 Apr 29 07:08 usr
drwxr-xr-x 1 root root 4096 Apr 29 07:08 var
root@759949382d99:/#
```

Running sleep command in detached terminal mode

```
Windows PowerShell
drwxr-xr-x 191 root root 0 May 25 14:49 proc
drwxr-xr-x 2 root root 4096 Apr 29 07:08 root
drwxr-xr-x 1 root root 4096 Apr 29 07:08 run
drwxr-xr-x 2 root root 4096 May 19 19:45 sbin
drwxr-xr-x 2 root root 4096 Apr 29 07:08 srv
dr-xr-xr-x 11 root root 0 May 25 14:49 sys
drwxrwxrwt 2 root root 4096 Apr 29 07:08 tmp
drwxr-xr-x 1 root root 4096 Apr 29 07:08 usr
drwxr-xr-x 1 root root 4096 Apr 29 07:08 var
root@759949382d99:/# exit
exit
PS Y:\wsl\197\ME8_Containerization_and_Docker\1-running_containers> docker run -d ubuntu:16.04 /bin/sleep 3600
a138fb0b8ec21d3302703b32c11839376154272f6f955f2c51234e3f52187988
PS Y:\wsl\197\ME8_Containerization_and_Docker\1-running_containers> docker ps
CONTAINER ID   IMAGE      COMMAND                  CREATED         STATUS         PORTS          NAMES
a138fb0b8ec2   ubuntu:16.04 "/bin/sleep 3600"      8 seconds ago   Up 5 seconds   -a             confident_chatelet
PS Y:\wsl\197\ME8_Containerization_and_Docker\1-running_containers> docker ps -a
CONTAINER ID   IMAGE      COMMAND                  CREATED         STATUS         PORTS          NAMES
a138fb0b8ec2   ubuntu:16.04 "/bin/sleep 3600"      10 seconds ago   Up 7 seconds   -a             confident_chatelet
759949382d99   ubuntu:16.04 "/bin/bash"            About a minute ago   Exited (0) 25 seconds ago   -a             beautiful_brown
9df95d486543   ubuntu:16.04 "/bin/bash"            3 minutes ago       Exited (127) About a minute ago   -a             blissful_hamilton
f3a26f4992e9   ubuntu:16.04 "bin/bash -it"         3 minutes ago       Exited (0) 3 minutes ago   -a             ecstatic_easley
552e469f5928   ubuntu:16.04 "bin/bash"            4 hours ago         Exited (0) 4 hours ago     -a             beautiful_villani
e78373653656   ubuntu:16.04 "bash"                4 hours ago         Exited (0) 4 hours ago     -a             optimistic_lamarr
41d97c691cf1   ubuntu:16.04 "echo 'Hello World!\n'" 4 hours ago         Exited (0) 4 hours ago     -a             admiring_jang
d346f50ad625   ubuntu:16.04 "echo 2"              4 hours ago         Exited (0) 4 hours ago     -a             happy_wilbur
fd4c88be1579   ubuntu:16.04 "ls -la"              4 hours ago         Exited (0) 4 hours ago     -a             elegant_liskov
60be81d9643b   ubuntu:16.04 "ls"                  4 hours ago         Exited (0) 4 hours ago     -a             tender_swanson
4c8e497a3cde   ubuntu:16.04 "/bin/echo 2323 bruh"   4 hours ago         Exited (0) 4 hours ago     -a             elated_black
371a92b4983c   ubuntu:16.04 "/bin/echo 2323"       4 hours ago         Exited (0) 4 hours ago     -a             priceless_perlman
fe450e016985   ubuntu:16.04 "/bin/echo 'Hello wo..." 4 hours ago         Exited (0) 4 hours ago     -a             friendly_mayer
PS Y:\wsl\197\ME8_Containerization_and_Docker\1-running_containers> docker exec -it a138 bin/bash
root@a138fb0b8ec2:/# ps aux
USER      PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root         1  0.0  0.0  4372   792 ?        Ss   14:51   0:00 /bin/sleep 3600
root         8  0.0  0.0  18236 3276 pts/0    Ss   14:52   0:00 bin/bash
root        19  0.0  0.0  34420 2724 pts/0    R+   14:53   0:00 ps aux
root@a138fb0b8ec2:/# exit
exit
PS Y:\wsl\197\ME8_Containerization_and_Docker\1-running_containers> |
```

Stopping sleep command, exiting the container, and deleting all containers

```
Windows PowerShell
PS Y:\wsl\197\ME8_Containerization_and_Docker\1-running_containers> docker stop a138
a138
PS Y:\wsl\197\ME8_Containerization_and_Docker\1-running_containers> docker ps
CONTAINER ID   IMAGE      COMMAND                  CREATED         STATUS         PORTS          NAMES
PS Y:\wsl\197\ME8_Containerization_and_Docker\1-running_containers> docker ps -a
CONTAINER ID   IMAGE      COMMAND                  CREATED         STATUS         PORTS          NAMES
a138fb0b8ec2   ubuntu:16.04 "/bin/sleep 3600"      5 minutes ago     Exited (137) 18 seconds ago   -a             confident_chatelet
759949382d99   ubuntu:16.04 "/bin/bash"            7 minutes ago     Exited (0) 6 minutes ago     -a             beautiful_brown
9df95d486543   ubuntu:16.04 "/bin/bash"            8 minutes ago     Exited (127) 7 minutes ago     -a             blissful_hamilton
f3a26f4992e9   ubuntu:16.04 "bin/bash -it"         9 minutes ago     Exited (0) 9 minutes ago     -a             ecstatic_easley
552e469f5928   ubuntu:16.04 "bin/bash"            4 hours ago       Exited (0) 4 hours ago     -a             beautiful_villani
e78373653656   ubuntu:16.04 "bash"                4 hours ago       Exited (0) 4 hours ago     -a             optimistic_lamarr
41d97c691cf1   ubuntu:16.04 "echo 'Hello World!\n'" 4 hours ago       Exited (0) 4 hours ago     -a             admiring_jang
d346f50ad625   ubuntu:16.04 "echo 2"              4 hours ago       Exited (0) 4 hours ago     -a             happy_wilbur
fd4c88be1579   ubuntu:16.04 "ls -la"              4 hours ago       Exited (0) 4 hours ago     -a             elegant_liskov
60be81d9643b   ubuntu:16.04 "ls"                  4 hours ago       Exited (0) 4 hours ago     -a             tender_swanson
4c8e497a3cde   ubuntu:16.04 "/bin/echo 2323 bruh"   4 hours ago       Exited (0) 4 hours ago     -a             elated_black
371a92b4983c   ubuntu:16.04 "/bin/echo 2323"       4 hours ago       Exited (0) 4 hours ago     -a             priceless_perlman
fe450e016985   ubuntu:16.04 "/bin/echo 'Hello wo..." 4 hours ago       Exited (0) 4 hours ago     -a             friendly_mayer
PS Y:\wsl\197\ME8_Containerization_and_Docker\1-running_containers> docker rm $(docker ps -a -q)
a138fb0b8ec2
759949382d99
9df95d486543
f3a26f4992e9
552e469f5928
e78373653656
41d97c691cf1
d346f50ad625
fd4c88be1579
60be81d9643b
4c8e497a3cde
371a92b4983c
fe450e016985
PS Y:\wsl\197\ME8_Containerization_and_Docker\1-running_containers> docker ps -a
CONTAINER ID   IMAGE      COMMAND                  CREATED         STATUS         PORTS          NAMES
PS Y:\wsl\197\ME8_Containerization_and_Docker\1-running_containers>
```